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he Strength of a Nation lies in it's Natural Resources"



FORESTS AND FARMS



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A PICTORIAL PRESENTATION OF THE SOCIAL AND ECONOMIC SERVICES OF THE NATIONAL FORESTS

TO AGRICULTURE



PREPARED BY

CALIFORNIA REGION, FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

FOR THE

EIGHTEENTH ANNUAL CONVENTION

OF THE

AMERICAN FARM BUREAU FEDERATION

AND

CALIFORNIA FARM BUREAU FEDERATION

PASADENA, CALIFORNIA

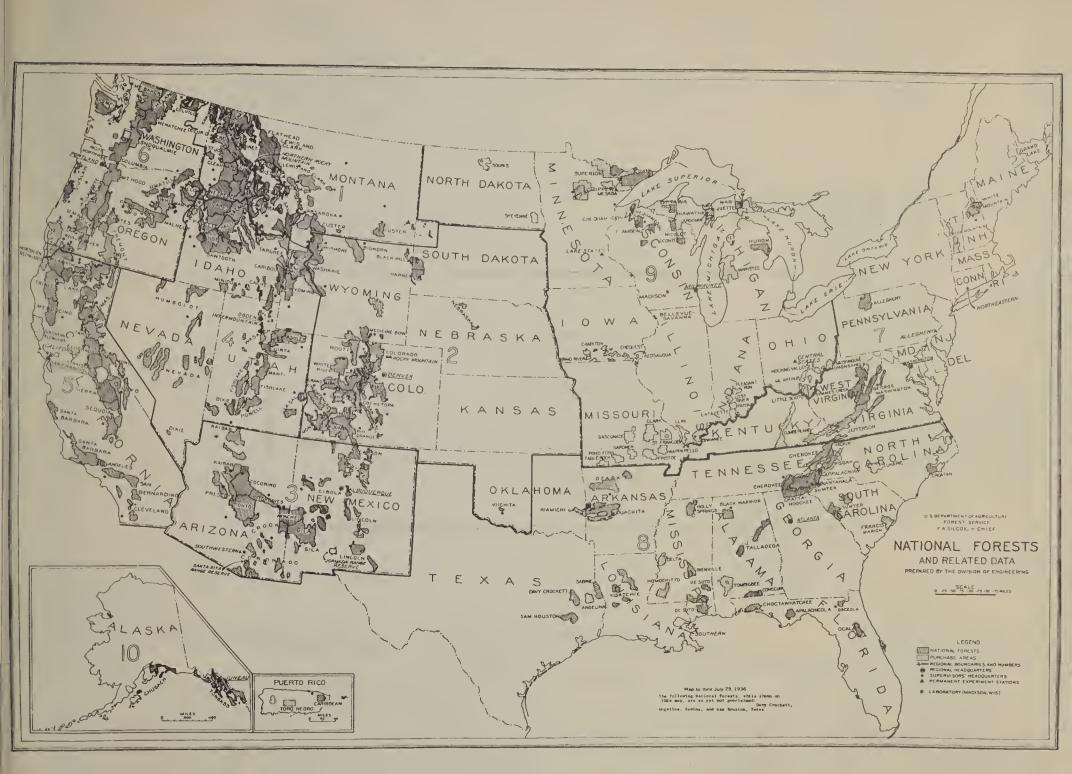
DECEMBER 6-11, 1936

"THE relationship of forestry to agriculture is implicit. Though most people think of the Forest Service of the United States Department of Agriculture as the guardian of the National Forests, the Service has an equal obligation, in cooperation with States and individuals, towards the farm woodlot. More than $2\frac{1}{2}$ million farmers derive part of their cash income from this source. And it is interesting to note that there are more acres of tree land on American farms than acres of any other crop—more, in fact, than in all the National Forests.

"Even if the National Forests are considered by themselves, the relationship between forestry and agriculture remains close. I need only mention the cooperation between the Forest Service and the livestock industry in the use of certain National Forest lands for grazing. Incidentally, I am glad to say that under Forest Service administration, erosion which was serious at the time the National Forests were put under administration, has in the main been checked.

"Again, in many regions a permanent agricultural civilization depends upon irrigation; this in turn depends upon maintenance of plant cover on adjacent mountains from which come the water supplies; and in turn this depends upon forest and range conservation. There is likewise an irreducible inter-relationship between forestry, wild life conservation, recreation and agriculture."

H. A. WALLACE, Secretary of Agriculture.



FARMS

THE farmer is one of our greatest wood users. He is also one of our greatest wood owners, for one-third of the total forested lands of the Nation is on farm property. Farm woodlands in the United States cover an area of 185 million acres. If assembled in a solid strip 100 miles wide they would reach from Maine to California. One-third of the total annual cut of timber of all kinds comes from farm forests.





FORESTS

"OUR forests, with their manifold resources and products, with the abundant opportunities they provide for recreation and inspiration, have been and continue to be a part of the basic pattern woven into our national fabric. Their well-being is essential to the well-being of our people themselves. Indeed, it is fortunate that the needs of the forest and the needs of our people fit so well together."

Franklin D. Roosevelt,

President of the United States.

REDWOODS

IN THE redwood groves of California you stand among the living relics of distant ages—the surviving remnants of a splendid race. Like pillars of a temple the massive columns space themselves with unity and symmetry, rising high above a jungle of brakes and ferns. The red-brown shafts lift to heights at which the voice of the winds in their branches is hushed by distance and the delicacy of the topmost fronds seem refined to lacy texture. From the sun-flecked vaults above, a flood of radiance pours down to mingle with the beauty of the forest.





CHAPARRAL

CALIFORNIA'S famed Sequoias are known throughout the world; but few people are acquainted with the wonders of the "Elfin Forests" that clothe the mountains of southern California. These extensive areas of "chaparral" (a Spanish word for dense, bushy growth of shrubs and small trees) are major factors in the regulation of stream flow, control of floods and the prevention of erosion—all of paramount importance to the adjacent rich agricultural valleys and the highly improved metropolitan areas with a population of more than $2\frac{1}{2}$ million people.

WATER

"THE real conservation problem of the West is the conservation of water....
From Nebraska west, water and water alone is the key to our future. We need the mountains and hills and great protected back country or we cannot have sufficient water for our valleys.... There must be a great western strategy for the protection of our watersheds and the plant life on them.... We must replace homestead thinking with watershed thinking."

RAY LYMAN WILBUR,
President, Stanford University.





IRRIGATION

THE prosperity of the West today depends largely upon an adequate supply of water for irrigation. Water, rather than land, is the open sesame to the agricultural development of many regions. Irrigation alone is responsible for the sugar-beet fields of Utah, the alfalfa fields of Idaho, and the orange groves of California. What the National Forests mean to the water user may be summed up in the one word "Service." Every user of water which originates in the mountains—and this includes the greater number of water users in the West—must look to the National Forests for safeguarding his supply.

WATERPOWER

A LONG the road toward higher civilization we have come beyond the Age of Steam into the Age of Electricity. Electric power for transportation, industry and the home is a prime necessity of our every-day life. It is fortunate for the success of the Power Age that 170 million acres of our forest land are under the protection and management of the Federal Government. The mountain regions of our National Forests, with their rugged topography, snow-fed streams and forested watersheds, furnish ideal conditions for hydroelectric power development to meet the steadily increasing demands of our growing population.





LUMBERING

TO PROVIDE a never-failing supply of lumber and wood products for the needs of our people, a forest crop should be harvested when ripe, even as a corn crop. A proper harvesting selects the mature trees and allows the immature ones to grow and ripen in their turn. Thus the forest goes on yielding forever. This is the principle on which the National Forest timber is harvested. Only the ripe trees are cut. Seed trees are carefully protected. The slash is piled and burned to reduce the fire hazard, and the forest is left in a healthy, growing state.

SAWMILL

THE first sawmill in America was established at Jamestown, Virginia, in 1625, and the first commercial mill was placed in operation at Berwick, Maine, in 1631. These early-day mills were often combined with grist mills driven by waterpower and cut a very small amount of lumber per day. Great changes have taken place in the lumber industry in the past 300 years, and today many of the large mills of our country produce a daily cut of more than one million board feet. Our people, as they have advanced in civilization and in the knowledge of science, have made increasing use of the forests and their products until there are now over four thousand articles which are made from wood.





CATTLE

erosion begins, and what the wind leaves the water takes. Dust storms, soil depletion and deserts are the aftermath. When the grass and water of the vast open range were depleted by overgrazing, the herds moved on into the forested mountains. Today, more than 82 million acres of National Forests, which have been under productive grazing management for 30 years, are inseparably linked with the success of agriculture and the livestock industry of the West.

SHEEP

THE products of the farm and of the range are so thoroughly integrated in the economic structure of agriculture that they are inseparable. Grain crops and other products are grown on the cultivated and irrigated areas and are in a large measure consumed by livestock. The other major product, the range forage, is a supplemental feed which often determines whether or not a well-rounded and profitable agricultural business results. Sheep are one of the major products of farm and range which the market demands. More than 6 million sheep are grazed each year on the well-managed ranges in the National Forests of the West.





RECREATION

THE primitive environment of mountains, forests, lakes and streams found in the National Forests of our country provide unequalled opportunities for health-giving rest, sport and recreation to more than 17 million people each year. Here one may motor over good roads, camp under the shade of pines and firs, fish in the sparkling streams or enjoy nature's quiet and solitude. To provide for the comfort and convenience of these visitors, the Forest Service has established thousands of public camp grounds provided with simple camping and sanitary facilities.

WILDLIFE

WILD life is as essentially a product of the forest as timber and forage. The forested lands of the United States provide the habitat for most of the remaining wild life which is important for food, fur, hunting and aesthetic purposes. Although game animals have decreased on much of the forest land of our country as a whole, the game within the National Forests has increased 100 per cent in the past 15 years. Game conservation is an important objective in the coordinated management of the National Forest to obtain the largest wild-life population consistent with the use of other resources and the available food supply.





FIRE

POREST fires are the greatest single obstacle to the effective conservation of our natural resources. In the wood of giant Sequoias we find records of fires that occurred on this continent as early as 245 A. D., and ever since that time great conflagrations have periodically swept our forests. Even in the 20th Century there have been fires that have burned hundreds of thousands of acres and caused great loss of life and property. The number of fires that occur annually in the United States is in excess of 150,000, and the area swept by flames each year totals more than 40 million acres. Seventy-five per cent of all the fires that lay waste our land and natural resources are caused by human carelessness, and the biggest forestry problem of today is the prevention of man-caused fires.

FLOODS

FLOODS that follow heavy rainfall on burned and denuded mountain slopes often cause great loss of life and property and ruin agricultural lands. A few years ago in southern California, a fire started by a careless man destroyed the protective chaparral cover on 5000 acres of steep mountain slopes. A month later, a three-day rainstorm occurred in this region. Floods, heavily ladened with sand and boulders, swept down the narrow canyons in waves of destruction. More than 40 people lost their lives and the property damage exceeded \$5,000,000. In the adjacent canyons, where the protective chaparral cover was not burned, there was no loss of life and the flood waters caused little damage.





DROUGHT

PROUGHT strikes quickly and surely at the interlocking activities of our economic life, all of which are either directly or indirectly dependent on water. When the forest and protective cover of watersheds is destroyed by reckless cutting and raging fires, the welfare of the farmer and his family is at stake. The lifegiving water supply slowly dwindles, crops fail, the farmer moves on, and the land becomes a desert. Only the most careful conservation of water resources can save the farmer from drought and disaster.

ROADSIDE EROSION

THE Forest Service controls erosion on the immense cuts and fills of high-speed mountain roads by planting willow, baccharis and native grasses in contour rows. These soil-binding plants on the steep inclines prevent the wide-spread damage to roads which otherwise follows heavy rainstorms. This method was developed through research carried on by the California Forest and Range Experiment Station.





MEADOW EROSION

EROSION on mountain meadows is started mainly by overgrazing, which destroys the grass and the soil-binding strength of its roots. Not only the fertile top soil is washed away, but the water table is also rapidly lowered by subsurface drainage. Studies by the California Forest and Range Experiment Station show that meadows can be restored, if taken in time, by the construction of dams along with carefully regulated grazing.

EXPERIMENTAL RANGE

NTHE San Joaquin Experimental Range of the California Forest and Range Experiment Station, a herd of some 70 cattle is maintained with the cooperation of University of California specialists. This 3,600-acre Experimental Range is being conducted to determine how to maintain and improve the foothill range for the best interests of the livestock industry as well as the wise use of the land in the public interest.





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